# Delta Operations for Salmon and Sturgeon (DOSS) Group

Conference call: 2/1/11, 9:00 a.m.

**Objective:** Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmon and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: http://swr.nmfs.noaa.gov/ocap/actions.htm

**DWR**: Andy Chu, Angela Llaban, Mike Ford

**FWS**: Nick Hindman

NMFS: Barbara Rocco, Bruce Oppenheim, Barb Byrne, Jeff Stuart, Garwin Yip

**DFG**: Dan Kratville, Joe Johnson

Reclamation: John Hannon, Thuy Washburn

SWRCB: Kari Kyler, Ann Snyder

#### **Agenda**

1) Fish monitoring

- 2) Water project operations
- 3) Weather forecasts
- 4) Real-time data meeting

# **Fish Monitoring**

Knights Landing: Data for 1/25 to 1/31/11 (no data reported for 1/26, 1/29). Total catch was 84 fish, of which 75 were fall run, 5 were spring run, and 1 was winter run; there was 1 ad-clipped Chinook and 2 ad-clipped steelhead caught; no wild steelhead were caught. Average flows were 10,260 cfs with the lowest on 1/30 at 9,621 cfs. Water temperature was constant at 51°F on each of the 5 days; Secchi ranged from 1.5 to 2.5 ft; turbidity was not measured. Average CPUE for fall/spring run was 5.86 and 0.05 for winter/ late-fall run. CPUE for fall/spring run was 10.0 on 1/25, but went down to 1.44 on 1/30.

<u>Tisdale Weir</u>: Data for 1/22 to 1/30/11 (no data reported for 1/23, 1/25, 1/27, 1/29). Total catch was 204 fish of which 159 were fall run, 24 were spring run, and 4 were winter run; there were no late-fall run caught. There were 8 ad-clipped Chinook and 9 ad-clipped steelhead caught; there were no wild steelhead caught. Water flows averaged 10,722 cfs with a high of 12,300 cfs on 1/22, and a low of 9,360 on 1/30. Average water temperature was 49.3°F. Turbidity averaged 10.18 NTU with a high of 12.1 NTU on 1/22 and a low of 8.6 NTU on 1/26. CPUE for fall/spring run was 9.3, and 0.203 for winter/ late-fall run.

Moulton Weir: Data for 1/22–1/30/11 (no data reported for 1/23, 1/25, 1/27, 1/29). There were 195 fish caught of which 164 were fall run, 6 were spring run, and 2 were winter run. There were no late-fall run caught. There were 4 ad-clipped Chinook and 19 ad-clipped steelhead caught; no wild steelhead were caught. Water flows average 9,719 cfs with a high of 11,366 on 1/22 and a low of 8,370 cfs on 1/30. Average water temperature was 50.4°F; average turbidity was 9.48 NTU with a high of 14.8 on 1/22 and a low of 5.78 on 1/30.

<u>Chipps Is trawl</u>: There were 43 fish caught of which 27 were ad-clipped steelhead, 1 was a late fall Chinook, 9 were ad-clipped Chinook, 2 were splittail, and 4 were delta smelt (65–70 mm); there were no winter run caught.

<u>Sacramento trawl</u>: There were 7 fish caught; all were fall run Chinook; no other species of concern were caught.

Mossdale trawl: No species of concern were caught

<u>Beach seines</u>: There were 717 fish caught of which 641 were fall run, 73 were spring run, 3 were ad-clipped steelhead; there were no wild steelhead caught.

Overall, the fish appear to be staying somewhere in the Delta; none are leaving at this point.

#### Salvage data (1/24-1/30)

<u>CVP</u>: Fall run: lost 89 for the past week; increasing in number; length ranged from 30 to 40 mm; facilities are not efficient at catching them because of their small size. Louvers designed for larger size juveniles 90-100 mm. There were no late fall and no spring run for the past week. Winter run: 14 were estimated salvaged for a loss of 22 for the week.

<u>SWP:</u> No fall, late-fall, or spring run Chinook were salvaged. Winter run: salvaged 5 for loss of 22. Numbers of winter-run dropped since the peak on 1/20 when the first trigger was reached.

<u>Cumulative total</u>: Combined YTD loss of unclipped winter-run is 878 since October 1, 2010.

# Older juvenile Chinook loss and loss density

<u>SWP:</u> Except for 1/25/11, when the loss was 21.93, loss density was 1.48 fish/TAF, and there were no losses from 1/24 through 1/30.

CVP: Losses ranged from 0 to 7.8 fish/TAF on 1/29.

The combined loss rate for both projects ranged from 0 to 24.53 fish, with the highest on 1/25. Loss density decreased to 0 on 1/30.

DWR (Llaban): It was noted that when comparing the estimates to the actual loss calculated, the average difference was only  $0.05 \pm 0.28$  Standard Deviation (SD) for daily losses and  $0.005 \pm 0.023$  SD for average density. The values are very close to each other; therefore, DWR is confident that the estimate vs. the actual loss is accurate. If the estimate is borderline for a trigger, DOSS must rely on the actual data for that period of time.

## Steelhead salvage

<u>CVP</u>: There were 40 ad-clipped steelhead salvaged; there were no wild steelhead salvaged.

<u>SWP:</u> There were 28 ad-clipped steelhead salvaged and 12 wild steelhead salvaged.

<u>Cumulative total</u>: Combined YTD salvage of un-clipped steelhead was 26, and clipped was 108 since October 1, 2010.

#### **Spring-run Surrogate loss rate**

December release: 78.67 confirmed; or 0.103% of release

January release: 2.6 confirmed; or 0.002% of release.

Tagged fish were salvaged only at the CVP on 1/25; none at the SWP so far. There were only 5 unread tags currently; getting closer to being able to read tags in a timely manner. If DOSS takes into account both read and unread tags, the new percent loss for the December releases is 0.107%. The loss for January remains at 0.002%.

The number of fall run coming from upstream areas (Red Bluff and above) will pick up from now until April. Fish numbers in the Sacramento River will increase, but there will not be much on the San Joaquin River until April/May.

# **Green Surgeon salvage**

There has been no green sturgeon salvaged at either fish facility since October 1, 2010.

### **Smelt Working Group (SWG)**

The three-station water temperature was 9.8°C and is creeping up slighting. The 5-day USGS flows were -3,756 cfs. OMR flows were -3,985 cfs on 1/27, with a 5-day average of -4,046 cfs. Turbidity is decreasing in the Delta now. The 3-day criteria were 5.01 NTU at Holland and 5.8 NTU at Victoria; data from Prisoner Point was not available. Other stations not in the 3-day criteria were showing a clearer water trend in the south and central Delta.

Delta smelt larva survey: Week of 1/23 – no delta smelt collected. Spring Kodiak was 177 delta smelt a Cache Slough; no longfin or delta smelt salvaged from 1/18 to 1/30. 4 adult delta smelt were salvaged at CVP for a total of 8 fish; none at SWP since June 2010.

There are no recommendations for this week from the SWG. The export reductions resulting from NMFS' OMR flow action to protect listed salmon are keeping conditions good in the south Delta for delta smelt. There was some discussion regarding Article 21 water and exports. It was agreed that once fish protection actions are met, the projects can continue to export according to what's allowed. There is no mention in either BiOp RPA of Article 21 deliveries, therefore, it should not have a bearing on BiOp triggers. FWS requested that DWR clarify the Article 21 water demands. This should be a WOMT discussion.

#### **Operations**

Keswick Dam (Sacramento R): 4,000 cfs and ramping down

Oroville Dam (Feather R): releases were at 1,750 cfs Nimbus Dam (American R): releasing 2,500 cfs

Goodwin Dam (Stanislaus R): 200 cfs Sacramento River at Freeport: 21,000 cfs

San Luis Reservoir: 1.98 TAF total

CVP is pumping water to the SWP to make up some power. Reclamation will reduce exports to meet reduced water demands.

OMR flow: There are a lot of missing values for the past week. On 1/31 since 5:00 p.m., the numbers are not available. The 1/30 projection for daily OMR flows were close to -4,700 cfs; the 5-day average calculation was based on no missing values and 1/30 was close to -4,100 cfs.

The -5000 cfs OMR action is controlling state operations now. Since the trigger was hit, the -3,500 cfs impact on exports has increased quite a bit. Combined CVP/SWP exports are at 5,500 cfs and will continue to drop as the San Joaquin River inflows drop. Wednesday (2/2) will be 5,000 cfs and Friday to 4,500 cfs.

Delta Outflow: 21,382 cfs and E/I ratio: 27%

On 2/1/11: the E/I ratio changes from 65% to 35%. 21 days count for X2 in February. Base flow standard for Vernalis is 2–3,000 cfs for the 7-day requirement

The DCC gates are closed. The projects need 190 days for 150 chloride standard (EC); the south Delta is at 1.0. Suisun Bay is at 8.0 EC.

**Weather forecast:** Dry for this week and possibly next week. San Joaquin River flows will continue to drop to 6,000 cfs for the 5-day, currently at 7,600 cfs as of yesterday (1/31).

**Real-time data reporting issue:** No date set yet for a meeting. DWR operators and Environmental Services will meet internally first. Once the correct chain of command is identified, DOSS group will be notified and a meeting date and time will be set.

DOSS Advice to NMFS and WOMT: No advice this week.

**Next Meeting:** Conference call: 2/8/11, 9:00 a.m.